

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
12 February 2004 (12.02.2004)

PCT

(10) International Publication Number
WO 2004/013703 A1

- (51) International Patent Classification⁷: **G03G 9/097**
- (21) International Application Number:
PCT/GB2003/003381
- (22) International Filing Date: 1 August 2003 (01.08.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
0217899.4 1 August 2002 (01.08.2002) GB
- (71) Applicant (for all designated States except US): **INTERNATIONAL COATINGS LIMITED** [GB/GB]; P.O. Box 20980, Oriel House, 16 Connaught Place, London W2 2ZB (GB).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): **KITTLE, Kevin, Jeffrey** [GB/GB]; 19 Denwick Close, Chester-le-Street, Co. Durham DH2 3TL (GB).
- (74) Agents: **COULSON, Antony, John et al.**; Abel & Imray Chartered Patent Attorneys, 20 Red Lion Street, London WC1R 4PQ (GB).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:**
- with international search report
 - before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*



WO 2004/013703 A1

(54) Title: TONER/DEVELOPER COMPOSITIONS

(57) Abstract: Toner compositions have a post-blended particulate additive which comprises aluminium oxide and aluminium hydroxide with, optionally, a third component such as silica or a wax, which is a tribo-charging additive which, upon tribo-charging of the toner particles, shifts the charge distribution in either the positive or negative direction. As well as providing toner compositions having adequate fluidity, the use of pre-extrusion charge-control additives can be avoided. There are also advantages, for example, in terms of charge distribution characteristics, stability of charge distribution, and avoidance of matting effects. Developer compositions are formed by admixture with suitable carrier particles.